



## **State Revolving Fund Loan Programs**

### **Drinking Water, Wastewater, Nonpoint Source**

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#### **ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT**

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#### **DELAWARE COUNTY REGIONAL WASTEWATER DISTRICT Desoto Wastewater Collection System SRF PROJECT WW 11 10 18 03**

**DATE: October 20, 2011**

**TARGET PROJECT APPROVAL DATE: November 21, 2011**

#### **I. INTRODUCTION**

The above entity has applied to the Clean Water State Revolving Fund (SRF) Loan Program for a loan to finance all or part of the wastewater project described in the accompanying Environmental Assessment (EA). As part of facilities planning requirements, an environmental review has been completed which addresses the project's impacts on the natural and human environment. This review is summarized in the attached EA.

#### **II. PRELIMINARY FINDING OF NO SIGNIFICANT IMPACT (FNSI)**

The SRF Clean Water Program has evaluated all pertinent environmental information regarding the proposed project and determined that an Environmental Impact Statement is not necessary. Subject to responses received during the 30-day public comment period, and pursuant to Indiana Code 4-4-11, it is our preliminary finding that the construction and operation of the proposed facilities will result in no significant adverse environmental impact. In the absence of significant comments, the attached EA shall serve as the final environmental document.

#### **III. COMMENTS**

All interested parties may comment upon the EA/FNSI. Comments must be received at the address below by the target approval date above. Significant comments may prompt a reevaluation of the preliminary FNSI; if appropriate, a new FNSI will be issued for another 30-day public comment period. A final decision to proceed, or not to proceed, with the proposed project shall be effected by finalizing, or not finalizing, the FNSI as appropriate. Comments regarding this document should be sent within 30 days to:

**Max Henschen  
Senior Environmental Manager  
State Revolving Fund  
100 N. Senate Ave. IGCN 1275  
Indianapolis, IN 46204  
317-232-8623; mhensche at ifa.in.gov**

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# ENVIRONMENTAL ASSESSMENT

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## I. PROJECT IDENTIFICATION

Project Name and Address: **Desoto Wastewater Collection System  
Delaware County Regional Wastewater District  
100 West Main Street  
Muncie, IN 47305**

SRF Project Number: **WW 11 10 18 03**

Authorized Representative: **Mr. Max Abrell, President**

## II. PROJECT LOCATION

The Delaware County Regional Wastewater District (DCRWD) includes all of the unincorporated areas in Delaware County. The Desoto project area is located northeast of Muncie in Delaware and Hamilton civil townships. The project area is located in the Muncie East quadrangle, sections 28, 29 and 30, T21N, R11E, as well as T21N, R10E, section 25. See Figure 1.

## III. PROJECT NEED AND PURPOSE

The Delaware County Health Department, in correspondence dated June 1, 2011, stated that there are sewage disposal issues in the unincorporated area of Desoto. Records indicate that most of the septic tanks tie directly into underground drainage tiles that flow to Campbell Creek and a wetland northwest of town. Testing by the Delaware County Health Department and the Indiana State Department of Health has confirmed that this area has failing sewage systems introducing sewage into surface waters and ground water.

The purpose of the proposed project is to extend sewer service to Desoto and the nearby area to remove homes from the failing septic systems and to eliminate the illicit discharge of wastewater.

## IV. PROJECT DESCRIPTION

The District will install approximately 35,150 feet of 1.25 to 4-inch diameter sewer force main by horizontal directional drilling. The District will purchase and install individual grinder pumps and piping on private properties. The pumps will grind the waste into very small particles and pump it through a small pressure service line. Each service line will be connected to a larger pressure sewer pipe; the collected wastewater from the project area will be pumped to an existing manhole, from where it will flow by gravity to the Muncie Sanitary District's wastewater treatment plant; see Figure 1.

## V. ESTIMATED PROJECT COSTS, AFFORDABILITY AND FUNDING

### A. Selected Plan Estimated Cost Summary

#### Construction and Equipment Costs

*Grinder pump stations – Type 1 Simplex	\$468,000
*Grinder pump stations – Type IV Duplex	\$13,750
Curb Stop Assembly	\$84,000
Flushing Connection	\$30,000
*1.25-inch service line	\$105,000
1.5-inch pressure sewer	\$19,500
2-inch pressure sewer	\$83,440
3-inch pressure sewer	\$25,265
4-inch pressure sewer	\$280,080
Bore and jack under railroad	\$40,000
Isolation valve	\$30,000
Air release valve and structure	\$49,300
Connection to existing manhole, flow meter, odor control, inspection	\$30,000
Seeding and finish grading	\$38,000
Maintenance of traffic	\$38,000
Mobilization/demobilization	\$63,000

*Construction and Equipment Subtotal* **\$1,397,000**

*Contingencies* **\$139,700**

**Total Estimated Construction Cost (Rounded) \$1,537,000**

#### Non-construction Costs

Financial	\$30,000
Legal/Bond Council	\$30,000
Engineering Planning & Archaeology Report	\$45,000
Engineering Design & Bidding	\$145,000
Other Engineering Services (Construction Admin & Inspection)	\$144,000
Easement Negotiations	\$45,000
Railroad & DNR Permit Fees	\$15,000

*Non-Construction Subtotal* **\$454,000**

**Total Estimated Project Cost \$1,991,000**

\*Ineligible for funding through the State Revolving Fund (SRF) Program.

- B. The District will borrow \$791,000 from the SRF Program through a 20-year loan at a fixed interest rate to be determined at the time of loan closing. Delaware County Economic Development Income Tax funds will provide the remaining estimated cost of \$1,200,000. Homeowners will be responsible for the operation and maintenance of the grinder pumps and the lines from the pumps to the main sewer line. Monthly user rates and charges may need to be analyzed to determine if adjustments are required for loan repayment.

## VI. DESCRIPTION OF EVALUATED ALTERNATIVES

The District rejected the “No Action” alternative, since the Desoto community would be left with inadequate means of disposing and treating its wastewater. Without proper means of wastewater disposal and treatment, the residents are at risk of contaminating their private wells; no public water supply is available.

Besides the “No Action” alternative, the District evaluated: (1) a gravity sewer system; and (2) a low-pressure grinder pump system. Construction of a gravity sewer system is cost prohibitive due to excavation, requirements for manholes and lift stations, and larger diameter pipe. In addition, the sewers would not be able to maintain cleansing velocity during low flow without costly deep installation. Construction of low-pressure grinder pumps permits shallower construction depths and smaller diameter pipes; manholes are not required to install pressure mains. This type of system is significantly less expensive than installation of a conventional gravity system. **Therefore, the low-pressure grinder pump system is the selected alternative.**

## VII. ENVIRONMENTAL IMPACTS OF THE FEASIBLE ALTERNATIVES

### A. Direct Impacts of Construction and Operation

Undisturbed/Disturbed Land: The proposed sewer project will be constructed on disturbed land, since the pressure sewer piping will be installed either under or parallel to public roads within the area disturbed by road construction. The installation of the pressure sewers will be done with directional drilling, a trenchless technology.

Structural Resources (figures 2 and 3): Installation of the grinder pump at the Hester House, a “Notable” historic site south of Desoto, will disturb the yard; the service line to the main line sewer will be directionally drilled.

Construction and operation of the project will not alter, demolish or remove historic properties. If any visual or audible impacts to historic properties occur, they will be temporary and will not alter the characteristics that qualify such properties for inclusion in or eligibility for the National Register of Historic Places. The SRF’s finding pursuant to the Section 106 of the national Historic Preservation Act is: “no historic properties affected.”

Plants and Animals: The intent is to avoid wooded areas surrounding Campbell Creek and along E County Road 350N to minimize any possible negative impacts.

Prime Farmland: The proposed project will not cause a conversion of prime farmland.

Wetlands (Figure 4): The proposed project will not affect wetlands; Campbell Creek is a riverine wetland, but the sewer will be directionally drilled beneath it. Where a wetland appears to be close to the road, the proposed sewer main will be installed on the opposite side or under the roadway to avoid impacts to the wetland.

100-Year Floodplain (Figure 5): The project will not affect a 100-year floodplain.

Surface Waters: The sewer will be installed under Campbell Creek using the horizontal directional drilling method to minimize disturbance. The proposed project will not adversely affect waters of

high quality listed in 327 IAC 2-1-2(3), exceptional use streams listed in 327 IAC 2-1-11(b), Natural, Scenic and Recreational Rivers and Streams listed in 312 IAC 7-(2), Salmonid Streams listed in 327 IAC 2-1.5-5(a)(3), or waters on the Outstanding Rivers List (Natural Resources Commission Non-rule Policy Document).

Groundwater: Construction of the project will not affect groundwater quality.

Air Quality: Dust and noise will be produced during construction activities.

Open Space and Recreational Opportunities: The proposed project's construction and operation will neither create nor destroy open space and recreational activities.

Lake Michigan Coastal Program: The proposed project will not affect the Lake Michigan Coastal Zone.

National Natural Landmarks: The construction and operation of the proposed project will not affect National Natural Landmarks.

#### B. Indirect Impacts

The District's Preliminary Engineering Report (PER) states: *The Delaware County Regional Wastewater District will ensure, through the authority of its council, planning commission or other means, that future development, as well as future collection system or treatment works projects connecting to SRF-funded facilities will not adversely impact wetlands, wooded areas, steep slopes, archaeological/historical/structural resources, or other sensitive environmental resources. The District will require new development and treatment works projects to be constructed within the guidelines of the U.S. Fish and Wildlife Service, IDNR, IDEM, and other environmental review authorities.*

#### C. Comments from Environmental Review Authorities

This document serves as the first notice to the U.S. Fish and Wildlife Service and the IDNR Environmental Unit.

The Natural Resources Conservation Service, in correspondence dated May 23, 2011 stated that *"The revised project to construct low pressure grinder pumps that connect to the collection system in the town of Desoto, Delaware County, Indiana .....will not cause a conversion of prime farmland."*

### VIII. MITIGATION MEASURES

The District's PER states:

*Land grading and excavating will be kept to a minimum in order to reduce runoff and erosion problems.*

*Appropriate structural (e.g. sediment basins, staked hay bales, riprap) or agronomic (e.g. seeding, mulching, liming, fertilizing) practices to control runoff and sedimentation will be provided during*

*and after construction in accordance with the latest edition of "Indiana Handbook for Erosion Control in Developing Areas."*

*The plan will be consistent with applicable state and local ordinances and federal non-point source pollution and guidance.*

*If unanticipated cultural resources are encountered during construction, construction activities will be stopped so that the resources may be studied, protected or recovered.*

*The construction and operation of the project will not impact state or federal-listed endangered species or their habitat. Mitigation measures cited in comment letters received from the Indiana Department of Natural Resources (IDNR) and the U.S. Fish and Wildlife Service will be implemented.*

### **VIII. PUBLIC PARTICIPATION**

A properly noticed public hearing was held on July 6, 2011 at 4:15 pm in the Delaware County Building, 100 West Main Street, Muncie IN. No written comments were received in the 5-day period following the hearing. A second public hearing was held on July 26, 2011 at 6:30 pm at the Desoto United Methodist Church. Questions addressed during the July 26 hearing related to cost of connection, grinder pump operation/maintenance responsibilities, depth of sewers, and timetable. No written comments were received in the 5-day period following the hearing.





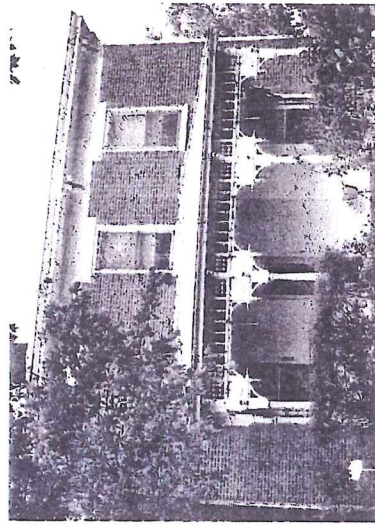
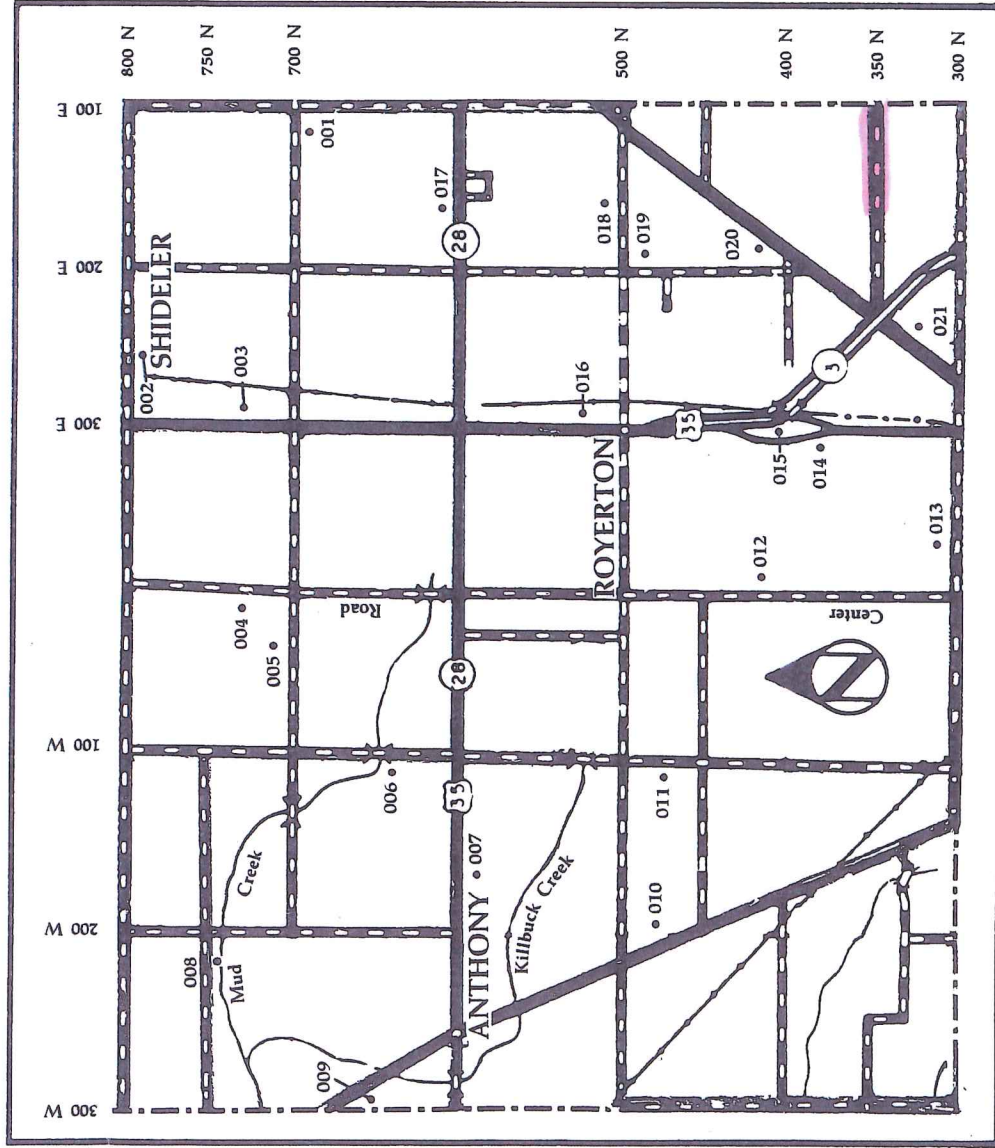






# Hamilton Township (20001-021)

## PROJECT AREA

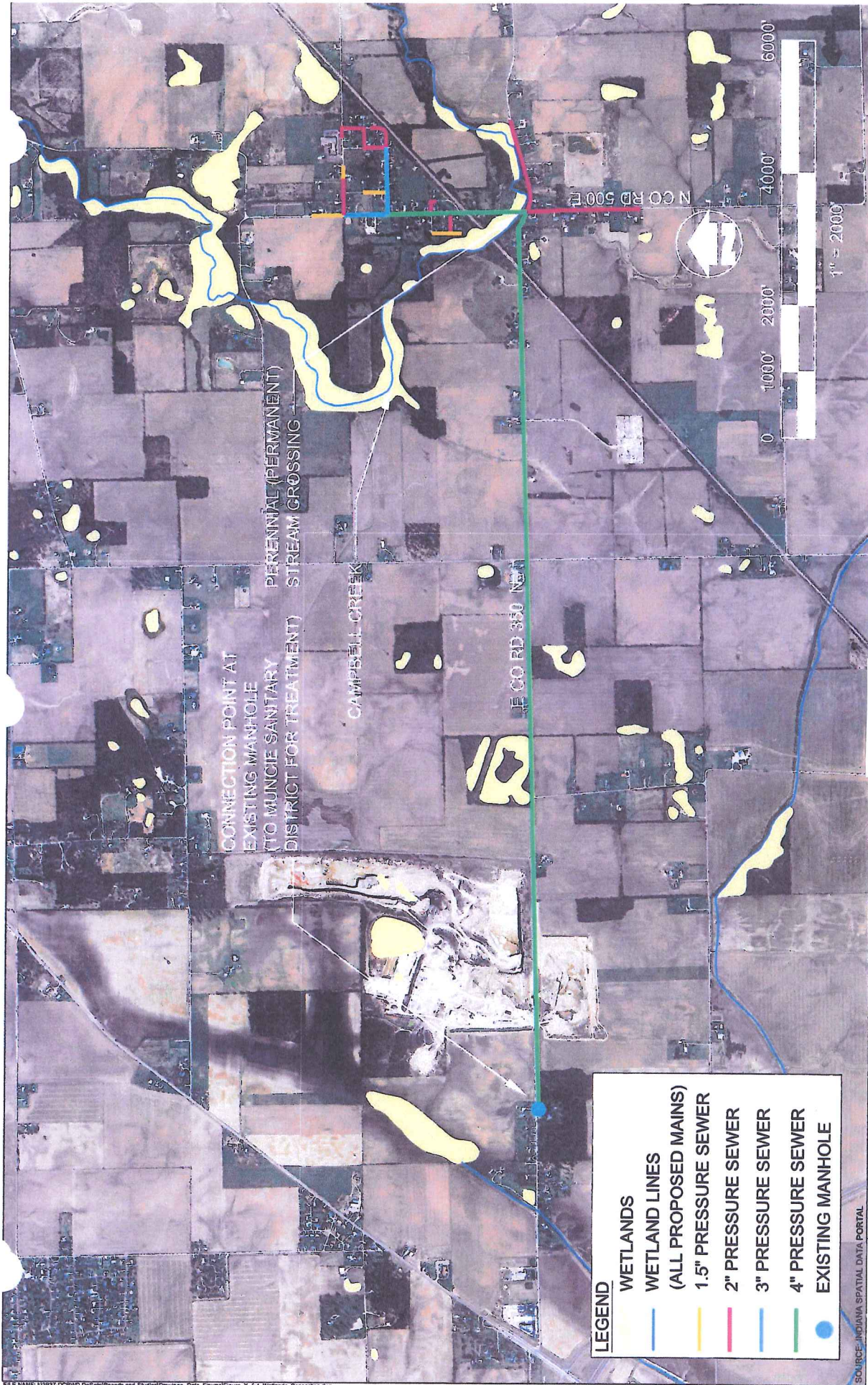


008	C	House, 750 N; Carpenter-Buuer, c.1900; Architecture (676)
009	C	House, Burlington Pike; Carpenter-Builer, c.1890; Architecture (676)
010	N	House, Burlington Pike; Romanesque Revival, c.1890, David M. Snider, builer; Architecture (676)
011	C	House, 100 W; Carpenter-Builer, c.1900; Architecture (676)
012	N	House, Center Road; Free Classic, c.1910; Architecture (676)
013	C	Barn, 300 N; Vernacular, 1937; Vernacular/Construction (441)
015	N	Miller House, 100 E; Greek Revival, c.1850; Architecture (441)
016	C	House, State Road 3; Greek Revival/American Four-Square, c.1860/c.1915; (180)
017	C	House, State Road 28; Carpenter-Builer, c.1890; Architecture (180)
018	C	House, 500 N; Italianate, c.1875; Architecture (180)
019	N	School No. 4, State Road 67; Romanesque Revival, 1897; Architecture, Education (180)
020	O	House, State Road 67; Greek Revival/Italianate, c.1865/c.1890; Architecture (180)
021	N	Hamilton House, State Road 67; Greek Revival, c.1870; Architecture (441)

No.	Rtg.	Description
001	C	House, 700 N; Carpenter-Builer, c.1870; Architecture (180)
002	N	Ebright Farm, 800 N; American Four-Square, 1923; Architecture (180)
003	C	Farm, State Road 35; Italianate, c.1880; Architecture (180)
004	C	House, Center Road; Bungalow, c.1910; Architecture (676)
005	C	Farm, 700 N; Carpenter-Builer, c.1900; Architecture (676)
006	N	House, 100 W; American Four-Square, c.1910; Architecture (676)
007	C	Hawkins Farm, 600 N; Italianate, (441)

**FIGURE 3: from Delaware County Interim Report**  
Indiana Historic Sites and Structures Inventory





**LEGEND**

- WETLANDS
- WETLAND LINES (ALL PROPOSED MAINS)
- 1.5" PRESSURE SEWER
- 2" PRESSURE SEWER
- 3" PRESSURE SEWER
- 4" PRESSURE SEWER
- EXISTING MANHOLE

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DATE: MAY 2, 2011  
 SCALE: 1" = 2000'

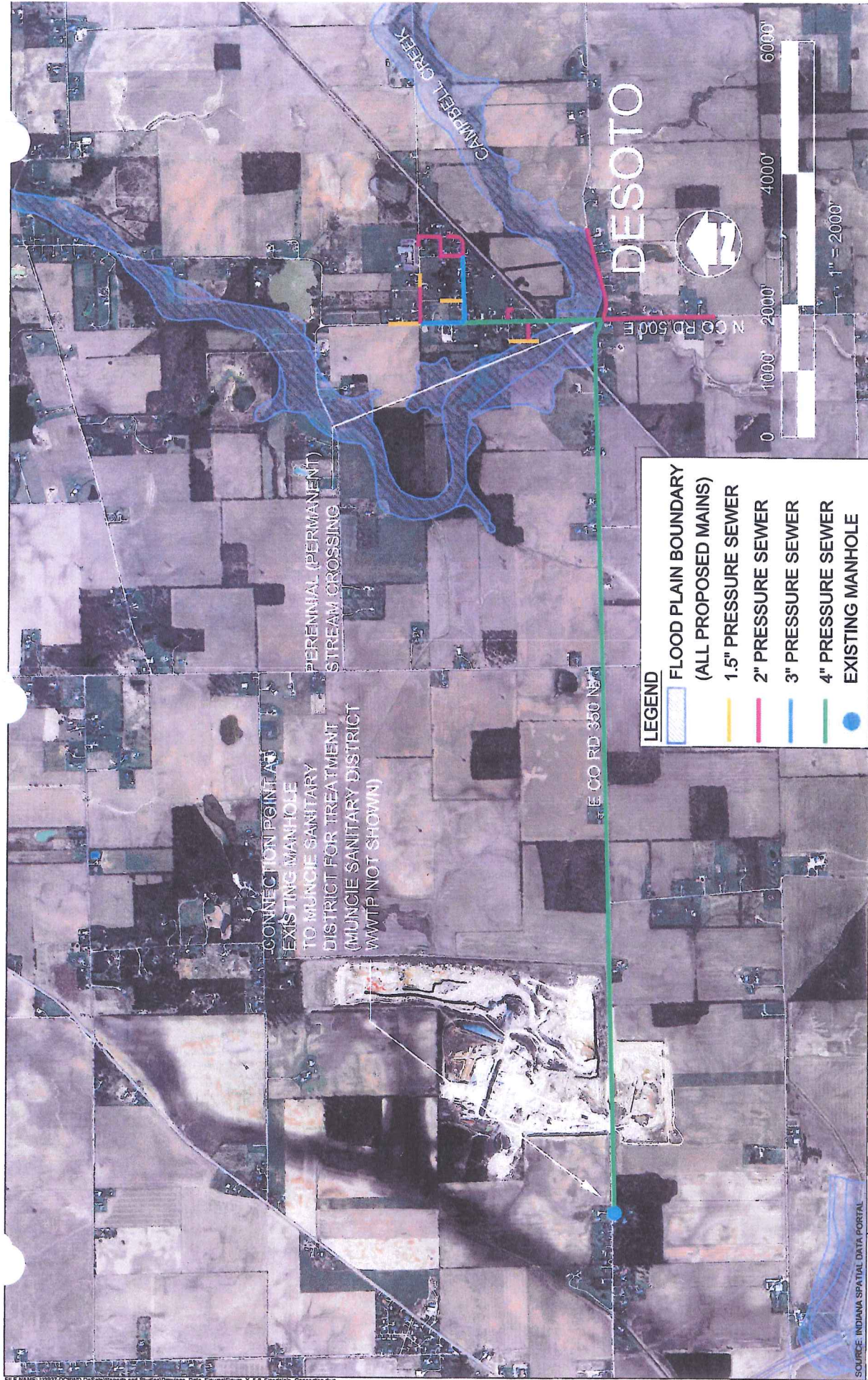
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**FIGURE 4**

**DELAWARE COUNTY REGIONAL WASTEWATER DISTRICT**  
**DESOTO WASTEWATER**  
**COLLECTION & PUMPING PER**  
**DESOTO OVERALL WETLANDS MAP**

SOURCE: INDIANA SPATIAL DATA PORTAL				DESIGNED: CMM	
GRW PROJECT NO. 3937		CLIENT PROJECT NO.		DRAWN: TNW	
REVISED		BY		REVIEWED: CMM	
NO.	DESCRIPTION	DATE		APPROVED: JPT	
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**LEGEND**

- FLOOD PLAIN BOUNDARY (ALL PROPOSED MAINS)
- 1.5" PRESSURE SEWER
- 2" PRESSURE SEWER
- 3" PRESSURE SEWER
- 4" PRESSURE SEWER
- EXISTING MANHOLE

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DATE: MAY 2, 2011

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**FIGURE 5**

**DELAWARE COUNTY REGIONAL WASTEWATER DISTRICT**

**DESOTO WASTEWATER**

**COLLECTION & PUMPING PER**

**DESOTO OVERALL FLOODPLAIN MAP**

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	DESCRIPTION		
REVIEWED: CMM		APPROVED: JPT	
SCALE CHECK: THIS MAP SHOULD MEASURE EXACTLY IF WHEN PLOTTED			

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